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ABSTRACT

Mastering stress management techniques can help college developmental class educators protect themselves from burnout. These techniques can also be taught to students in developmental classes to enable them to maximize the benefits from these classes. This paper outlines the causes of stress, identifies stressors, describes responses to stress, and discusses five coping skills that can be used by both students and teachers in developmental classes to handle the stressors of life and channel the stress responses in a useful way. The five coping skills presented are: (1) cognitive restructuring; (2) deep breathing; (3) muscle relaxation; (4) cue-controlled relaxation; and (5) visual imagery. The appendices give specific examples of exercises related to each coping skill discussed. Thirty-nine references are listed. (IAH)

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CAPITALIZING ON STRESS MANAGEMENT TECHNIQUES IN DEVELOPMENTAL CLASSES

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CAPITALIZING ON STRESS MANAGEMENT TECHNIQUES IN DEVELOPMENTAL CLASSES

Many students attend developmental classes in colleges. Some attend developmental classes because of their scores on placement tests. Others attend these classes because they have been encouraged to do so by their instructors. Still others may feel inadequate in a particular subject, such as mathematics, and regard the developmental classes as preparatory steps to assist them in achieving their educational goals. Many students in developmental classes experience feelings which they call stress.

Stress

An accepted phenomenon of modern day life, the term "stress" is discussed every day as it relates to a variety of life's facets. Courses are offered in the understanding of stress and how it works in one's life. Magazines and television programs often refer to stress. Scientific journals publish studies involving stress and stress management while books relating to this topic are being published in abundance.

One of the first steps in studying stress is to define the term. There are several approaches to defining stress. On one hand, it means the pressure one has placed upon him/her by the external environment. For example, Benson

(1975) defines stress as "environmental conditions that require behavior readjustment" (p. 59) and Sarason (1984) states that "stress can be understood in terms of a call for action" (p. 929). On the other hand it has come to mean the pressures (real or imagined) one feels or experiences due to his/her internal environment. Forbes (1979) stated that "stress is any action or situation that places heavy or conflicting demands upon you that upset your body's equilibrium" (p. 13). In either case, both cognitive and physiological components are a part of the individual's stress.

Selye (1974) explained the term "stress" as the changes in the body which occur whenever demands are placed upon it and further stated that "stress" may be positive--eustress or negative--distress. According to Forbes (1979) "stress is neutral. It is our reaction to it which determines whether it will be beneficial or harmful" (p. 16). Greenburg (1987) defines stress as "the combination of a stressor and stress reactivity (the response)" (p. 10).

Stressors

Selye (1956, 1974) coined the term "stressor" as a result of his experiments. During his work with laboratory animals Selye discovered that after a prolonged administration of certain substances many of the animals

developed the stress triad (bleeding gastrointestinal ulcers, hypertrophied or enlarged addrenal glands and atrophied or shrunkened lymphatic organs). He called the stimuli that brought about these changes "stressors" and all the changes which occurred within the organism as a result of the stressors, the stress response or The General Adaptation Syndrome. Selye further explained the three stages of The General Adaptation Syndrome: 1) the alarm reaction, 2) the stage of resistance, and 3) the stage of exhaustion.

The term "stressor" as defined by Selye (1974) is the external stimulus which brings about stress. The stressor can be either physiological or psychological in nature and will elicit the same response in the organism. Examples of physiological stressors include hot or cold environments, electrical shock and loud noises. Examples of psychological stressors include loss of a mate through death or divorce, a change in jobs, gain of a family member, change in financial state, change in schools, business readjustment and the beginning or ending of school (Benson, 1978, pp. 57-58). Shaffer (1982) stated that "something becomes a stressor only when the mind identifies it as one. The mind, in short, signals the body that a stressor is present--and the alarm reaction follows" (p. 7).

Individuals are bombarded with "stressors" from birth until death. Lagercrantz and Slotkin (1986) reported the

importance of the stress hormones, epinephrine and norepinephrine (physiological stressors) during the birth process. These hormones allow the fetus to withstand the stress of the birth process and enhance the lungs activity after birth thus illustrating eustress or positive stress.

Stressful Life Events

Holmes and Rahe (1967) developed a stressful events scale to rate the stress level of certain life events (psychological stressors). On the, scale events were given a numerical impact value with the maximum of 100 assigned to the event, death of a spouse. Divorce rated 73 while marital separation rated 63 and marital reconciliation 45. On the lower end of the scale vacations rated 13, Christmas 12 and minor violations of the law 11.

Variations of the stressful events scale by Holmes and Rahe (1967) suitable for college students, elementary school children and pre-school children have been prepared by several authors (Coddington, 1972 and Corbin and Lindsey, 1988). For college students the events with the highest impact units include: "Death of a close family member--100, Jail term--80, Final year or first year in college--63 and Pregnancy (to you or caused by you)--60." (Corbin and Lindsey, 1988, p. 181). Low impact units included: "Final exams--20, Family reunion--15, Change in recreational activities--15, Minor illness or injury--15 and Minor

violations of the law--11" (Corbin and Lindsey, 1988, p. 181).

Learning anxiety though not listed as a stressful life event is an event which could certainly occur during the first year of college, a high impact event on the scale. Turner (1985) in discussing learning anxiety stated that:

> Learning anxiety is a spiral process that tends to get worse with time. A student is anxious because of fear of failure, but the anxiety contributes to his failure. That only makes the anxiety, and thus the risk of failure worse. . . . Learning anxiety affects students of all ages. As a society we are becoming increasingly learning-anxious as we become more competitive, more test-oriented (p. 3).

Another type of anxiety which could occur during the first year of college, as well as any other year, is the phenomenon of test anxiety. Students in developmental classes, as well as, all other classes may suffer from test anxiety. Hickey (1980) described test anxiety as having cognitive, affective and physiological aspects during an evaluative situation. A highly test anxious subject is prone to emit self-centered interfering responses or to indulge in negative self-talk (Sarason, 1975). Wine (1971) reported that highly test anxious individuals spend less

time on directional attention to the task at hand than low test-anxious individuals.

Some people have many stressful life events and apparently suffer no harmful effects; others may have only a few of these events but seem to suffer many harmful effects. Interpretation of the sum of impact units for a six to twelve month time range includes the awareness that the greater the sum the more serious the life change and the more susceptible the person to major illness (Holmes and Rahe, 1967 and Benson, 1975). Schafer (1987) emphasized "the greater the clustering of life events, the greater the chances of becoming ill" (p. 92). When stress overwhelms the individual's coping ability, then problems arise and mental and/or physical health problems become evident.

Appropriate management of the stressors of life can enhance one's coping ability. A number of ways to improve stressor management by an individual was presented by Schafer (1987). These include:

1. Become more aware of the nature of stressors in your daily life.
2. Take personal responsibility for your pace of life and for major life changes.
3. Know your comfort zone.
4. Find a good fit between your own needs--your comfort zone--and the demands of your environment.

5. Know how rapidly and how much your comfort zone can change.
6. Anticipate the probable stressful effects of major life changes.
7. Avoid clustering too many major life changes.
8. Manage daily life--micro-engineer your time--so you have optimal lead time, afterburn time, and time for unfinished business.
9. Establish clear priorities and values so you can select opportunities and challenges wisely in a world of overchoice.
10. Select activities and challenges that are meaningful to you and avoid meaningless ones whenever possible.
11. Take enough risks so you are challenged but not so many that you are overwhelmed (pp. 180-182).

The General Adaptation Syndrome

Hans Selye (1956, 1974) described the stress response or activity as the the General Adaptation Syndrome with three stages : 1) The Alarm Reaction, 2) The Stage of Resistance and 3) The Stage of Exhaustion. The hypothalamus of the brain mediates the alarm reaction which resembles Walter Cannon's "fight or flight" syndrome (Shaffer, 1982). The sympathetic division of the autonomic

nervous system is activated resulting in an elevated heart rate, increased blood pressure, increased breathing rate and increased release of epinephrine and norepinephrine from the adrenal medulla. Blood is shifted from the skin and gastrointestinal tract to the heart, lungs and muscles. The pituitary hormone ACTH (adrenocorticotrophic hormone) level is elevated. This causes an increased release of the glucocorticoids--cortisol and cortisone--from the adrenal cortex. An elevated blood glucose level accompanies the elevated ACTH level. All of these changes give the individual increased coping abilities enabling one to run, fight or remain there and "shake" (Shaffer, 1982 and Selye, 1956, 1974). Selye (1956) discovered that the "stress triad" of bleeding gastrointestinal ulcers, hypertrophied adrenals and atrophied lymphatics in laboratory animals occured during the alarm reaction if it occured at all.

SHOW TRANSPARENCIES OF SYSTEMS INFLUENCED BY STRESS

During the stage of resistance, body systems' activities, as well as the hormone levels, resume their normal ranges. The stressors may still be present, but the body has adjusted or is in the process of adjusting to maintain homeostasis. Damage repair and energy restoration

are accomplished by the body during this stage (Selye, 1956, 1974 and Shaffer, 1982).

The third stage of the General Adaptation Syndrome, the stage of exhaustion, occurs when prolonged arousal causes depletion of energy and damage to organs. Hormone levels may reach higher levels than were present during the alarm reaction. Resistance to pathogens decreases and mechanisms for repair may be damaged. Recovery is slow and death or "diseases of adaptation" (Selye, 1974, p. 138) may occur.

Burnout

Although the term "burnout" is sometimes given to the stage of exhaustion Seidman and Zager (1986-1987) state that "stress and burnout are not synonymous" (p. 27). Selye (1976) stated that life without stress is death; therefore, one must have stress in life. However, one does not have to have burnout in life. According to Holland (1982) burnout is a "a negative response to stress" (p. 59). The result of burnout according to Pines and Maslach (1978) is "physical and emotional exhaustion involving the development of negative self-concept, negative job attitudes, and loss of concern and feeling for clients" (p. 233).

The term "burnout" relates to job distress in which there is a "progressive mental and physical exhaustion" (Schafer, 1987, p. 310). If the job is related to human services, Kahn (1978) states that "burnout is a syndrome of

inappropriate attitudes towards clients and towards self, often associated with uncomfortable physical and emotional symptoms ranging from exhaustion and insomnia to migraine and ulcer." (p. 61)

According to Holland (1982) there are degrees of burnout intensity. In working with special educators he presented three levels of burnout intensity:

1. First degree--produces mild, short-lived periods of irritability, fatigue, worry, frustration.
2. Second degree--moderate discomfort lasting two to three weeks.
3. Third degree--accompanied by stress-related physical problems such as chronic back pain, migraines, and ulcers (p. 59).

A variation of burnout or job distress is "teacher burnout" which according to Seidman and Zager, (1986-1987) involves "a negative pattern of responding to stressful teaching events, to students, and to teaching as a career as well as a perception that there is a lack of administrative support." (p. 26). An instrument, The Teacher Burnout Scale has been developed by Seidman and Zager (1986-1987) containing four subscales: "1) Career Statisfaction; 2) Perceived Administrative Support; 3) Coping with Job-Related Stress; and 4) Attitudes towards Students" (p. 26).

Teachers of developmental classes may suffer from stress and "burnout." By learning and utilizing appropriate stress management techniques, these teachers may prevent "burnout" from occurring.

USE THE TEACHER BURNOUT SCALE HERE

Perception

How individuals perceive an event or situation determines if it is a stressor to them. A student in a developmental class may perceive himself/herself as being "dumb" or "stupid" for having to be in the developmental class. The developmental student may have other negative thoughts regarding his/her presence in the class. These negative self perceptions and negative thoughts will act as stressors for the student. In addition to their perceptions of events as stressors, the actual coping method used will be important in determining the intensity, duration and possible harmful results of their stress. Fleming and Singer (1984) stated that "most researchers define coping as a response to stress--behavioral or psychological responses designed to somehow reduce the aversive qualities of stress" (p.942). These coping responses can be direct or indirect. The direct responses involve problem solving activities to

reduce stress. The indirect or palliative responses involve individuals' acceptance of the problem and their management of the stress responses which normally develop.

SHOW TRANSPARENCIES ON PERCEPTION HERE

Personality Types

An aspect of perception may be related to the individual's personality type. Three such personality types are TYPE A, TYPE B and TYPE C. The Type A person is "aggressive, always in a hurry, has excessive competitive drive, impatient and hostile" (Greenberg, 1987, pp.112-113). Persons with type B personality "exhibit no free-floating hostility or sense of time urgency and aren't excessively competitive" (Greenberg, 1987, p. 113). Type A persons are more likely to have heart attacks than Type B persons. Persons with Type C personality traits have "an increased susceptibility to cancer" and include "the sort of person who wants to please others, even to the detriment of his own desires; the type who holds in his own needs, frustrations and anger, and goes out of his way to avoid troubling friends, family or strangers, 'the nice guy' " (Drehe, 1988, p. 108). Type Cs may appear to resemble Type Bs in calm-

ness; however, they have a great deal of "unexpressed frustration and hostility, in addition to depression and despair. The type C person experiences negative feelings but doesn't express them" (Drehe, 1988, p. 109).

Our personality types may influence our perceptions of stressors and our responses to them. Greenberg (1987) and Drehe (1988) offered suggestions on how one can learn to control or moderate Type A and Type C personality types and thus reduce the risk of ill-health. In our modern day world we often do not have control of many events which occur but we can learn how to control our perception and response to these events and thus maintain our mental and physical health.

Coping Skills

There are a variety of coping strategies which if learned and practiced by both students and teachers in developmental classes can give both tools to handle the stressors of life and channel the stress responses which follow in a useful way. There are five coping skills which will be presented: 1) Cognitive Restructuring; 2) Deep Breathing; 3) Muscle Relaxation; 4) Cue-controlled Relaxation and 5) Visual Imagery.

Cognitive Restructuring. The process of getting the individual to think in a more positive and less self-deprecating manner is called cognitive restructuring

or "systematic rational restructuring" (Goldfried, Linehan and Smith, 1978, p. 33). Cognitive coping techniques are modeled after Albert Ellis' rational emotive therapy (Denny, 1980). Ellis (1962) stated:

> If . . . people essentially become emotionally disturbed because they unthinkingly accept certain illogical premises or irrational ideas, then there is a good reason to believe that they can somehow be persuaded or taught to think more logically and rationally and thereby undermine their own disturbance (p. 161).

An example of cognitive restructuring involves changing negative statements to more positive statements. For example "This low grade is the worst thing that ever happened to me. It's horrible. What a Rotten Person I am!" is changed to: "How unfortunate I didn't do well on this test. I genuinely blew it. Yet it's not the end of the world. Next time I certainly will study harder." (Schafer, 1987, p. 227).

A developmental student's negative statement, "I am so dumb, I'll never be able to do this work" is changed to "This is difficult but I will try to do my best." In working with students in developmental classes, the teacher can help the students' use of cognitive restructuring by giving positive encouraging statements regarding the

students' work. This will enable the students perceive themselves in a favorable way thereby enhancing their learning process.

The teacher's attitude about teaching developmental classes will also influence the students' attitudes. By presenting the developmental class as an opportunity for growth and preparation for each student's success, the teacher will enhance the student's feelings of selfworth as well as project a positive influence on the classroom atmosphere. Students in developmental classes, as well as, all classes need caring, concerned teachers to guide them in their studies---when this is the case learning can be very rewarding for both student and teacher as both use cognitive restructuring to change negative statements to positive ones.

Studies using cognitive restructuring to successfully decrease test anxiety have been reported by Goldfried et al. (1978). Sweeny and Horan (1982) reported the successful use of cognitive restructuring in reducing musical performance anxiety. Friedman et al. (1978) used cognitive restructuring as a part stress management training program to successfully reduce test anxiety in students.

APPENDIX A

DEMONSTRATE COGNITIVE RESTRUCTURING HERE

Deep Breathing Exercises. Many studies refer to breathing exercises or deep breathing as part of the treatment in stress management sessions or in studies comparing several coping techniques utilized by subjects to reduce test anxiety (Barrios, Ginter, Scalise, McKnight and Miller, 1976; Friedman, et al., 1978; Throll, 1982). In her study of math anxiety reduction Sequin (1984) explained the use of deep breathing exercises as a part of the Suggestive Accelerative Learning and Teaching Method (SALT) developed by Dr. Lozanov of the University of Bulgaria. Her presentation was as follows:

> When you breathe I want you to expand your diaphragm so that you feel the breath all the way back to your midsection--not just the upper chest, but all the way down below the belt. You will inhale for a count of four, hold for a count of four, and exhale for a count of four. Try to think only of your breathing. Put all other thoughts out of your mind. OK. Breathe in 1, 2, 3, 4, hold 2, 3, 4, exhale, 2, 3, 4. Be sure that when you exhale you get all the air out. Give it a little extra push at the end (p. 34).

Cohen (1980) presented a similar process for the deep breathing exercises. She also advised students who could not follow the inhalation--exhalation routine to stretch and

yawn to relieve constriction and tension in the chest and then to try to inhale and exhale deeply.

APPENDIX B

DEMONSTRATE DEEP BREATHING EXERCISES HERE

Muscle Relaxation Exercises. Most muscle relaxation programs are based on original work by Edmond Jacobsons published in the 1920's (Goldfried, 1977). Benson (1975) utilizes muscle contraction with other techniques to bring about the relaxation response. According to Borkovec, Grayson and Cooper (1978) this activity ". . . consists of two principal procedural components: tension release of gross muscles groups and focused attention on the resulting sensations of tension and relaxation" (p. 521).

The technique of muscle relaxation was successfully used for general tension reduction in subjects (Borkovec et al. 1978) and in reducing anxiety in dental patients (Miller, Murphy and Miller, 1978). This technique was successfully utilized in reducing students' mathematics anxiety (Sequin, 1984). It was included in a stress management training program for nursing students designed to train subjects in active coping techniques to reduce test

anxiety and manage other life stressors (Charlesworth, Murphy and Bentler 1981).

APPENDIX C

DEMONSTRATE MUSCLE RELAXATION EXERCISES HERE

Cue-Controlled Muscle Relaxation. There are two phases involved in the coping skill of cue-controlled relaxation. First, the subject must be trained in progressive relaxation and must use the deep breathing exercises while relaxing the muscles. Second, the subject in the relaxed state thinks of a word such as "calm" or "relax" upon each exhalation. The cue word is always paired with the exhalation.

This technique has been used to reduce test anxiety in students (Barrios et al., 1976; McGlynn et al. 1978). Musical performance anxiety was also decreased with the use of this coping skill (Sweeney and Horan, 1982). Another use for this coping skill was presented by Beck, Kaul and Russell (1978) when they used cue-controlled relaxation in the treatment of subjects' dental anxiety.

APPENDIX D

DEMONSTRATE CUE-CONTROLLED RELAXATION

Visual Imagery. The procedure of guided fantasy is a mind-calming exercise known as visual imagery. This skill provides subjects with a cognitive technique for controlling physiological responses related to the stress response. According to Geier (1986) it is based on individuals imagining themselves in a very peaceful relaxed state in a non-threatening environment. The subjects are told to breathe slowly and deeply, close their eyes and relax. The instructor speaks in a slow monotonous tone giving instructions such as:

> Sit comfortably, but with your back straight. Relax. Imagine that you are walking down a path through a cool, beautiful forest. . . . The trees are very big and they cast a cool shadow in your path. . . . The forest floor is covered with lovely mosses andferns [sic]. . . . You are walking down the path enjoying the beauty of the forest. . . . Breathe deeply. . . . Smell the fresh, cool fragrant forest air. . . . You are walking along easily, quite relaxed and comfortable (Sequin, 1984, p.34)

The coping technique of visual imagery has been used in treating subjects with test anxiety (Bennet, Hall and Guay,

1980; Sequin, 1984). It has been included in stress management seminars for students enrolled in nursing school (Charlesworth et al. 1981) and for subjects planning to enroll in nursing school (Geier, 1986/1988). Sequin (1984) reported that students' mathematics anxiety was reduced in a variation of the visual imagery technique. Muscle relaxation and soft backround music were used concurrently with visual inmagery in the Suggestive Accelerative Learning and Teaching Method (SALT) developed by Lozanov of the University of Bulgaria (Sequin, 1984).

APPENDIX E

DEMONSTRATE VISUAL IMAGERY-- VERBALLY and USE SOUND-SIGHT PRESENTATION by NANCY MICHEL

The coping skills presented are just a few of the useful skills that one can develop with practice--both teacher and student--to help control and channel the stress response. Barrios et al. (1976) stated that a "fundamental assumption shared by all coping skills training techniques is that the client learns an active skill which he or she can apply in a variety of anxiety-arousing situations in a daily life. The client learns a technique which can be used for remediation or prevention" (p.4).

Upon mastering the coping technique or techniques best suited for the individual the following characteristics will be evident when the individual is relaxed:

1) The heart rate slows and becomes more even;
2) Breathing becomes deeper and more even;
3) Muscles loosen and relax;
4) The hands and feet feel warm, or heavy or both;
5) The mind feels at peace;
6) The body has energy for at least several hours of work;
7) The entire body feels refreshed (Shaffer, 1982, p.62).

As developmental class educators learn to recognize the stressors in their lives, control the clustering of the stressors whenever possible, and master suitable coping techniques to manage unavoidable stressors, they will have more productive, happier lives managing their stress while preventing "burnout." In essence they will have developed their own individual relaxation response (Benson, 1975). As developmental educators learn these stress management techniques they can teach their students these same strategies--individually or in the classroom setting.

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APPENDIX A

COGNITIVE RESTRUCTURING TECHNIQUE

Cognitive Restructuring Technique

The following directions are given to subjects related to cognitive restructuring:

"When you have a negative thought or statement during the testing situation, say 'stop' or 'quit' and replace that thought with a positive alternative. For example:

1) 'People will think I am no good if I fail' becomes' Even if I fail I'm still a worthwhile person.'
2) If you think, 'I'm worried about this exam,' say outloud to your self, 'Stop! It is normal to feel little anxious, but worrying won't help anything. I'll just try to do the best I can and go on.'
3) Change, 'These questions are probably trick questions' to' Don't look for tricks, what does this question ask?'
4) Replace 'This is a stupid question' with 'What is the main point or question? I'll focus on that.'
5) To 'I can't answer this,' say, 'It is all right; I won't panic. Just skip this one and go on to to the next question.' " (Cohen, 1980; Weissburg, 1974).

APPENDIX B

DEEP BREATHING EXERCISES

Deep Breathing Exercises

The following instructions are given to the subjects related to deep breathing.

"Concentrate on inhaling deeply through the nostrils; then slowly exhale through the mouth. As you inhale, concentrate on the air flowing into your nostrils, nasal cavity, throat and chest. Concentrate on the increased pressure inside the thoracic cavity pushing against your ribs. As you exhale slowly, concentrate on the air leaving the thoracic cavity. Notice how the pressure lessens against the ribs as the air flows from the thoracic cavity or rib cage into the throat and slowly out the mouth. Do this four or five times. Feel the tension leaving your body.

"If our become anxious or tense, your breathing may become more labored, and you may hold your breath unconsciously. Follow these directions if you become anxious during the testing situation or any other tense moment.

"If you have trouble with tension even after deep breathing, then try yawning and stretching" (Cohen, 1980).

APPENDIX C

MUSCLE RELAXATION

Muscle Relaxation

The subjects are given the following instructions related to muscle contractions:

"The techniques described are based on Benson's muscle relaxation exercises as well as those of Cohen. While doing the exercise, remember to inhale and exhale regularly. Do not hold your breath.

"First, sit in a comfortable position in your chair. If you are practicing this technique at home, you may want to sit in a lounge chair or lie down on a couch or bed. Clinch your fist tightly, then relax. Notice the loose, limp feeling you have when you relax your hand. This is the way you wnat your whole body to feel when the exercise is completed, loose and limp.

"Start with your facial muscles. Raise your eyebrows. Tighten these muscles to the count of seven, then relax. Press your tongue to the roof of your mouth and hold to the count of seven, then relax. Smile without opening your mouth or parting your lips and hold to the count of seven, then relax.

"Push your left hand on your forehead with your head turned to the left. Do not bend your neck. Hold to the count of seven, then relax. Repeat with the right hand.

"Raise your shoulders towards your ear lobes. Hold to the count of seven, then relax.

"Try to touch your elbows your back. Hold to the count of seven, then relax.

"Raise your arms shoulder level, then bend the elbow and clinch the fist, 'making a muscle'--contracting the biceps muscles in both arms. Hold to the count of seven, then relax.

"Contract the buttocks. Count to seven, then relax.

"Contract the thigh muscles. Hold to the count of seven, then relax.

"Straighten the leg at the knee. Point the toe down contracting the calf muscles. Hold to the count of seven, then relax.

"Straighten the leg at the knee. Point the toe up flexing the foot or contracting the muscles of the top of the leg. Hold to the count of seven, then relax.

"Inhale and exhale deeply. Try to relax the muscles of the entire body.

"Try this muscle relaxation exercise two or three times a day and other times when you feel very tense" (Benson, 1975; Cohen, 1980).

APPENDIX D

CUE-CONTROLLED RELAXATION

Cue-controlled Relaxation

The following directions are given to the subjects:

"When practicing the technique, you should be sitting in a comfortable chair, or lying down on a comfortable bed. Close your eyes. Any constricting clothing should be loosened.

"The cue-controlled relaxation technique involves relaxing the muscles of the body when you say or think a special word. This word is you 'cue.'

"The cue word word could be 'still,' 'stop,' 'calm,' 'rose,' 'relax,' etc., any short word that is acceptable to you.

"As you say or think your cue word, breathe in through the nose and out through the mouth slowly and softly. As you say the cue word and breathe slowly, try to relax your muscles. Let them go limp.

"Practice this technique for approximately ten minutes two or three times a day" (Cohen, 1980).

APPENDIX E

VISUAL IMAGERY

Visual Imagery

The following directions are given to the subjects:

"We are going to try a method of relaxation called visual imagery. It is based on your imagining yourself in a very peaceful relaxed state in a non-threatening environment. As you are practicing this technique, remember to breathe slowly and deeply.

"Clinch your fist, then relax it. This is how you want your body to feel at the completion of the exercise, limp and relaxed all over just as your fist is limp and relaxed."

In a low pitched cadence say:

"Now close your eyes. You are at the beach. The sun is warm and pleasant. The ocean breeze is blowing gently on your face and hair. The sea gulls are calling. As you walk along the beach the water laps slowly against your feet as the waves come into shore. The sky is very blue with a few white billowly clouds moving slowly high overhead. The salty smell of the ocean spray is very refreshing and relaxing. As you walk on the beach the warm air makes you feel relaxed and warm. You feel warm and relaxed all over your body from your head to your finger tips even to your toes. You walk over to the dry sand and put down a beach towel. You lie down on the towel on the warm sand and rest for a short while. The breeze is gently blowing and the warm sun feels very pleasant on your body. You are very relaxed and rested."

Pause here to allow the participants to concentrate on the previous instructions.

"Now open your eyes. You feel very rested and relaxed from your pleasant trip at the beach. When you feel tense and upset, try taking a short restful, relaxing visit to the beach or to the mountains, through visual imagery."